

REMARKS

In response to the final Office Action dated January 31, 2006, claims 1-3 and 5 are amended. Claims 1-15 currently are pending. In view of the foregoing amendments and the remarks advanced below, reconsideration and allowance of the present application is respectfully requested.

In the Office Action, the Examiner maintained the rejection of Claims 1-3 under 35 U.S.C. 102(b) as allegedly being anticipated by Creaser et al. (U.S. Patent No. 5,086,635). In the "Response to Arguments" section of the Action, at page 3, the Examiner states that he did not find Applicant's arguments persuasive. Specifically, the Examiner was not persuaded that Creaser does not disclose the claimed structure of a laser irradiation stage, but instead merely teaches drawing a length of sheet metal through a variety of curvatures to form the sheet metal into a compound curve. To make this feature abundantly explicit, each of claims 1-3 has been amended to recite that the stage is incorporated into a laser irradiation apparatus. It is respectfully submitted that Creaser does not disclose "a laser irradiation stage incorporated into a laser apparatus" as presently claimed. Rather, Creaser is directed to a method and machine for forming compound curvatures in metal sheets by drawing sheet metal through a plurality of stages. Hence, none of claims 1-3 is anticipated by Creaser, because the reference fails to recite each and every element of the claims.

Furthermore, claim 2 is amended to recite that the "radius of the curvature with respect to a certain focal length of a condenser lens falls within a range of the following two equations:

$$y = 2539.3 \ln(x) - 21447;$$

$$y = 1666.7 \ln(x) - 13098,$$

where y is focal length of the condenser lens, x is the radius of the curvature."

Support for this feature is found, for example, in Applicant's specification, at pages 28-32 (Embodiment 4), and in Figure 9. It is respectfully submitted that Creaser also fails to disclose this feature.

The Examiner also maintained the rejection of claims 4-15 under 35 U.S. C. 103(a) as allegedly being unpatentable over Bonner et al. (U.S. Patent No. 6,743,601). In response to Applicant's arguments that Bonner does not disclose "a third means for providing an object to be irradiated with the laser beam expanded in the first direction and condensed in the second direction with a laser beam irradiation surface and moving the irradiation surface in

the second direction, relative to the laser beam,” and that the “third means” comprises “a first surface on which the object to be irradiated with the laser beam expanded in the first direction and condensed in the second direction is placed, the first surface having the ... curvature in the direction parallel to the first direction,” the Examiner states, at page 3 of the Action, “This argument is not persuasive. Bonner et al disclose well known curved work holding surfaces (e.g., column 3, lines 38-47) and the use of a curved work holding surface with a laser beam oscillator would have been obvious depending on the work which is intended to be irradiated.” However, the cited part of Bonner’s column 3 concerns a cylindrical rod, typically having a *conical* end with a film coating that is laser activated to adhere to a selected part of a specimen. According to Bonner, one process of gathering samples uses such a rod having a *conical surface* 70 coated with activatable coating E, as shown in Figure 10C. However, Bonner does not describe a laser with any particularity such that any reasonable inference can be made to meet the claimed features of “a first surface on which the object....is placed, the first surface having the cylindrical shape curvature in the direction parallel to the first direction,” as claimed. Moreover, claims 4-6 each recite that the laser beam irradiation surface has a curvature in a direction parallel to the first direction, with claims 4 and 6 further specifying that the curvature is of the *cylinder shape* and *concave cylinder shape*, respectively. It is respectfully submitted that nowhere in Bonner is such feature described.

The Examiner instead relies on bald allegations of what is well-known in the art to fill the gaps of claimed subject matter not described or suggested in the Bonner patent. It is respectfully requested that the Examiner either provide a reference teaching the missing elements of Bonner, and requisite motivation for combining with Bonner, or otherwise withdrawn this rejection.

Additionally, claim 5 is amended to recite the features of “radius of the curvature with respect to a certain focal length of a condenser lens falls within a range of the following two equations:

$$y = 2539.3 \ln(x) - 21447;$$

$$y = 1666.7 \ln(x) - 13098,$$

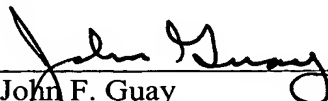
where y is focal length of the condenser lens, x is the radius of the curvature.” It is respectfully submitted that the Bonner patent also fails to disclose this feature. Hence, amended claim 5 recites further points of distinction from what is disclosed in Bonner.

Finally, the Examiner maintained the rejection of claims 1-15 under the judicially created doctrine of obviousness-type double patenting as allegedly being unpatentable over claims 1, 4, 8, 12, 15 and 17 of U.S. Patent No. 6,707,614 ("the '614 patent"). Applicant traverses this rejection for the same reasons stated in the October 26, 2005, response, and further for the following reasons:

In response to Applicant's contention that the claims of the instant application include features that are patentably distinct over the claims of the '614 patent, and the specific claimed features not apparently taught or suggested in the '614 patent, the Examiner acknowledges that the pending and patented claims are not identical, but he does not consider the differences "to add any elements which significantly change the instant claimed apparatus from the previously claimed invention" (see, page 3 of the Action). Applicant submits that this purely conclusory statement by the Examiner cannot substitute for establishing a *prima facie* case, and certainly does not address Applicant's arguments pointed out differences between the pending and patented claims. Indeed, the Office must establish a *prima facie* case before shifting the burden to the Applicant. Therefore, Applicant reiterates that the '614 patent claims do not appear to recite the features a cylindrical shape curvature, as recited in claim 1, the distance between the center of the curvature and a laser oscillator being longer than the distance between the center of radius of curvature and the object to be irradiated, as recited in claim 2, and a concave cylindrical shape curvature, as recited in claim 3. Moreover, the combination of features recited in claims 4-6 do not appear to be recited in the claims of the '614 Patent. As a result, withdrawal of this rejection is believed warranted.

Based on the forgoing, Applicant respectfully submits that the application is in condition for allowance. Prompt notification of the same earnestly solicited.

Respectfully submitted,


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